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ABSTRACT

This report summarizes, institution by institution, what each of the 17 public colleges and universities in Virginia have learned from formal assessment programs in the biennium ending in 1996 and how the institutions have used that information to improve their programs. A two-page spread for each institution includes a narrative which describes the school's various assessment programs and their findings and a small map indicating the school's location. The colleges and universities included are: Christopher Newport University, Clinch Valley College, College of William and Mary, George Mason University, James Madison University, Longwood College, Mary Washington College, Norfolk State University, Old Dominion University, Radford University, Richard Bland College, University of Virginia, Virginia Commonwealth University, Virginia Community College System, Virginia Military Institute, Virginia Polytechnic Institute and State University, and Virginia State University. (DB)

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ED 417 656

Virginia Higher Education

Indicators

of Institutional Mission

No. 2
1996

What do students learn?

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The Virginia Plan for Higher Education

State Council of Higher Education for Virginia

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Introduction

The public colleges and universities in Virginia are reaching the end of the first decade in which they have systematically assessed what their graduates know and can do with that knowledge. Virginia was the first state in the country to mandate a program in which that question is asked and answered campus by campus, program by program. For almost ten years, institutions have been evaluating what students learn from their major programs and the courses they take outside those majors, surveying alumni to determine how satisfied they are with their education, tracking the results of programs aimed at helping students who are at risk of failure to succeed, determining how well transfer students do – and using all that information to improve programs, to plan future directions, and to allocate resources. Their assessment programs will also help institutions of public higher education in Virginia ensure that their restructuring efforts are improving the effectiveness, as well as the efficiency, of teaching and learning on each campus.

The following pages summarize, institution by institution, what each has learned from its assessment program in the past biennium, as well as how it has used that information to improve its programs. The State Council of Higher Education hopes that Publication No. 2 of the Indicators of Institutional Mission will help prospective students decide where to go, alumni see where they have been, policymakers appreciate what needs support, and the general public understand what it is paying for.

Christopher Newport University

Christopher Newport University calls itself "the continuous university" — one in which learning takes place 24 hours a day. One part of the university that operates 24 hours a day is CNU On-Line, a computer-based system for students who want to learn at times convenient to them. One entire program, the bachelor's in governmental administration, and numerous courses from other departments are available through CNU On-Line. The retention of students from the first to second semesters has been low in this program, but students who successfully complete on-line courses tend to take a larger number of them the following semester. The university has found that students who participate in CNU On-Line learn at comparable rates to students who take similar courses on campus.

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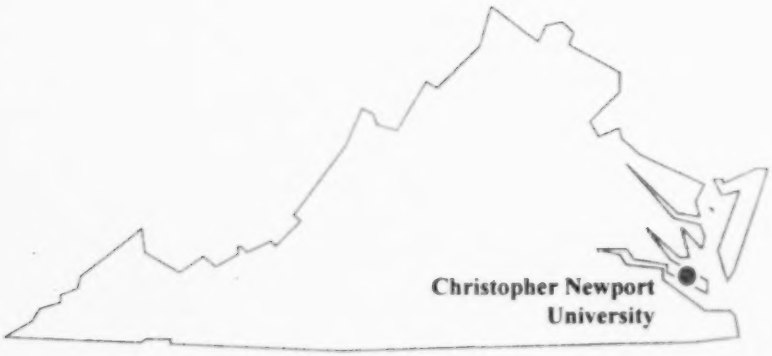
Last year, the university tested the writing abilities of a random sample of graduating students and found that the writing proficiency of some was below what it expected. In response, the university published a writing guide for CNU, developed and pilot-tested a professional writing skills module, continued to make writing assistance available to students through its writing center, and plans to implement a writing-across-the-curriculum program. The university has also planned sessions designed to assist faculty in all fields to teach writing skills. In the meantime, to better help its students develop their writing skills, Christopher Newport University has created, in the basic writing course, special sections that are taught by faculty who implement strategies appropriate to students' various learning styles. Students in these classes receive out-of-class support at the writing center.

Christopher Newport University's program-review process is well established and includes the assessment of student learning. The deans review what students learn and other evidence of program effectiveness and develop action plans for the programs. As a consequence of these reviews, several programs have been revised. A grant program in which the university math and science faculty collaborated with secondary-school faculty to determine knowledge and skill levels of high schools students who enter college lead to significant curricular revision in science and math, which will remain after the life of the grant. The university plans to expand that conversation between college and high-school faculty to other disciplines so that the same type of curricular improvement may occur in those areas. In one of the major findings from its assess-

ment of programs, CNU found that it needs to build career-enhancing skills into programs so that graduates are better able to enter the employment market. To do so, the university initiated cooperative programs and internships designed to facilitate career entry. Christopher Newport University found that some students were not receiving the advising that is so important in deciding what courses students should take to meet program requirements and their own needs. To ensure that such advising takes place, CNU will require an advisor's signature on registration forms, as well as provide additional training for faculty advisors who work with freshmen. Since Christopher Newport has a very large enrollment of transfer and non-traditional adults, it sees advising as even more important that it would be at an institution with a less fluid student body. In another effort to assist transfer students, the university works closely with a neighboring community college to track the success of transfer students. The two institutions work together to identify any deficiencies in preparation for CNU courses as a function of the prerequisites and where they are taken. As a result, both institutions have made some curricular changes. They are now pleased with the success of students transferring to CNU.



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Clinch Valley College

Clinch Valley College has used several tests and surveys to determine whether its students develop skills in mathematics, writing, reading, speaking, critical thinking, and using information technology in the course of their college education. Clinch Valley College also surveyed local employers to determine their satisfaction with its graduates; in almost all areas in which they were asked to rank them, the employers found their CVC employees good to excellent. But test and survey results in mathematics have been disappointing, and alumni and accreditors both have suggested increased emphasis on speaking skills. Moreover the former group, while happy with the college's influence on their writing, reading, independent learning, and problem-solving skills, were somewhat less positive about their ability to apply an understanding of scientific principles and methods, while the latter recommended that the college strengthen the computer competency components of the curriculum.

At Clinch Valley College, 1.5 percent of the education budget was set aside to fund proposals that enhance teaching, learning, and program delivery. In order to be funded, proposals needed to include mechanisms for determining whether the activity improved learning.

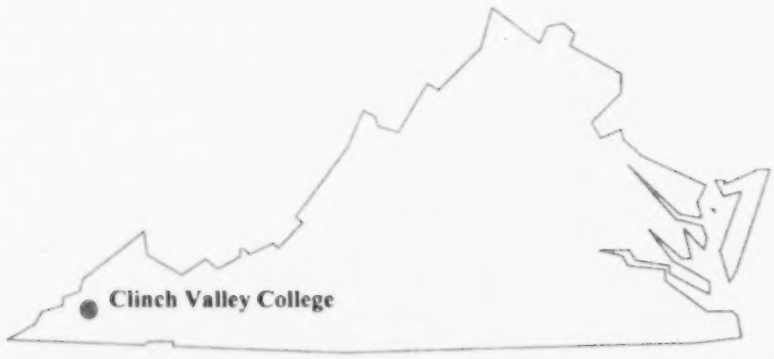
All of these findings have led the college to specific improvements (e.g., a strengthening of the mathematics requirement, the purchase by the mathematics department of the software program Mathematica, and the funding of the Oral Communications Lab and a computer lab to enhance instruction in the sciences) but also to a complete revision of general-education program. The new program will focus on better developing students' skills in communication, mathematics, foreign languages, and using computers; increasing their knowledge of the natural and social sciences and of their Western heritage; and cultivating their proficiency in thinking critically, ethically, and aesthetically through attention to literature and the arts. Faculty are still developing the assessment mechanisms for the new program.

In order to determine how well students have mastered the important skills and knowledge in their major disciplines, the Clinch Valley College faculty uses both surveys of student satisfaction and direct measures of student learning – such as standardized exams or tests or projects from senior "capstone" courses, in which students integrate and apply what they have learned in the major. The results have led the Department of Business and Economics to improve the teamwork among faculty teaching courses with multiple sections, revise individual courses, emphasize oral presentations, and increase assignments using computers. Psychology and

sociology faculty members have used student learning outcomes to revise the practicum experience and recommend that it become a requirement, improve communication among current and past majors, institute peer advising, improve the psychology labs, and work toward an increased use of computer-assisted instruction. The history department has introduced courses in global history, begun to emphasize the literature of history in its upper-level courses, and increased course coverage of topics on which students demonstrated less than the desired level of understanding. Finally faculty members in the sciences have adjusted course availability to address student concerns and test results.

Clinch Valley College has also studied some of its special populations, such as transfer students and at-risk students, to see how best to support them. Transfer students do well at CVC: they have about the same grades as "native" students, and more of them persist to graduation. The federally funded program at CVC to help at-risk students (i.e., first-generation, low-income, disabled, and provisionally admitted students) has led to retention rates of 70 percent for freshmen and 84 percent for transfer students.

At Clinch Valley College, 1.5 percent of the education budget was set aside to fund proposals that enhance teaching, learning, and program delivery. In order to be funded, proposals needed to include mechanisms for determining whether the activity improved learning. In this way, assessment has affected the resource-allocation decisions of the college.



College of William and Mary

William and Mary has used a wide variety of techniques to assess its general-education program over the years and as a result made significant changes in its curriculum. Beginning in fall 1996, the college is requiring students to meet general-education requirements designed to develop their individual autonomy, sense of social responsibility, capacity for personal fulfillment, cultural literacy, and political autonomy, as well as to enhance their lives and careers. To this end, the college set knowledge, skills, and values goals that require students to take courses in mathematics and quantitative reasoning; the physical and biological sciences; the social sciences; the history and culture of Western and non-Western societies; literature and the history of the arts; the creative and performing arts; and philosophical, religious, and social thought.

The assessment program is firmly established as a part of the institution's culture and is led by faculty members. Assessment findings have been used for resource allocation and faculty hiring decisions at the dean's level, particularly in the College of Arts and Sciences.

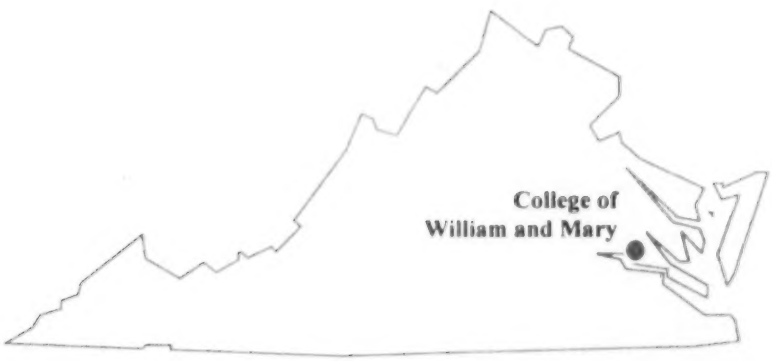
Within its new general-education requirements, the college expects that each freshman will take a writing-, reading-, and discussion-intensive seminar that is limited to 15 students. During the junior or senior year, each student will be required to have at least one individual or small-group learning experience that offers significant opportunity for the oral presentation and defense of ideas. The college's commitment to the development of its students' speaking skills has also led to the development of a new oral-communication program, which includes an introductory speech communication course and is supported by a diagnostic assessment procedure for incoming students, two oral-communication studios, and extensive faculty development aimed at teaching faculty how to incorporate oral communications activities into their courses.

In 1994, the college finished its first full assessment cycle for all its baccalaureate concentrations. Six interdisciplinary programs were the most recent ones evaluated through reviews done by external and on-campus evaluators, alumni satisfaction surveys, reviews of library holdings, and reviews of the academic performance of students. Program improvement has been the consequence. The library reviews, for instance, led to the strengthening of holdings in linguistics and public policy. Curricular improvements resulted from surveys of graduates' satisfaction in programs such as environmental science, whose alumni were generally pleased with their education but suggested changes in the program that the faculty has made by increasing its

attention to the depth and breadth of the curriculum. The linguistics faculty responded to its students by adding a course on language, while the women's studies faculty initiated a gender and science course. Sometimes assessment results suggested the need for a different deployment of faculty: team teaching has enriched the international relations program, and evaluators of the American studies program indicated it needed to have additional joint appointments with history, English, and other departments, a suggestion that is being implemented. Improvements in the support departments offer students include assistance to international-relations students searching for their first positions after graduation, the establishment of a Women's Studies Club, and the widespread development of student handbooks.

The College of William and Mary has also initiated assessments of student success and satisfaction in other areas. Transfer students participating in a focus group indicated that transfers believe the college is more rigorous than their previous institutions, and they noted that small classes helped them become integrated into the academic culture of the college. However, many focus-group participants had difficulty fitting into the social fabric of the college and suggested changes — for instance, becoming involved in campus organizations or clubs or living on campus — to help ease the transition to a new institution. The college also initiated the QUEST program to explore techniques that would enhance the adjustment of new students generally. This extended orientation program was offered in fall 1995 to a sample of students. Findings from this experiment will help the college revise its orientation program for all students.

The assessment program at the College of William and Mary is firmly established as a part of the institution's culture and is led by faculty members. Assessment findings have been used for resource allocation and faculty hiring decisions at the dean's level, particularly in the College of Arts and Sciences, while the library has found information about the adequacy of its holdings in various areas helpful as it develops its collection.



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George Mason University

At George Mason University, as at many other colleges and universities in the Commonwealth, the lack of coherence in the standard general-education curriculum has made it impossible to assess student learning in that program. And indeed, both faculty and students would like to see a greater emphasis in the curriculum on commonalities across disciplines, the development of key intellectual competencies, a core of knowledge that makes one culturally literate, preparation for lifelong learning, and the development of character leading to ethical action.

The computer science senior design exhibition, which is evaluated by both faculty and outside customers for whom the students designed the software systems, triples as an assessment vehicle, a culminating experience for students, and a valuable addition to a job-hunting portfolio.

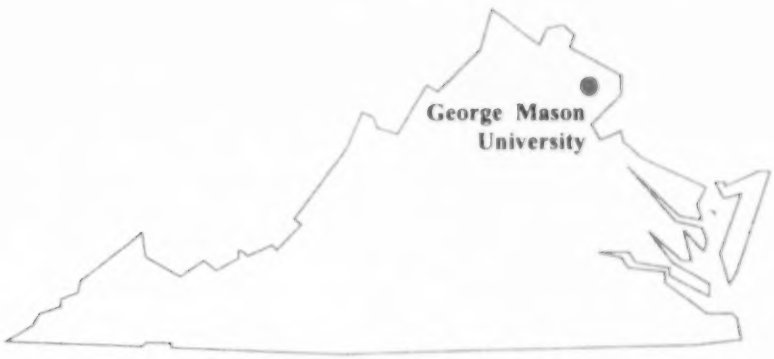
While these issues are being discussed, the university has developed alternatives for students whose successes and failures may shed light on that discussion, a set of more focused approaches to liberal studies that aim to foster specifically defined skills and knowledge. The youngest of these alternatives is the New Century College, in which freshmen and sophomores work in cross-disciplinary, team-taught "learning communities." Faculty members will be able to gauge how much students are learning in those communities by evaluating portfolios of student work. Meanwhile, they have begun to track student behavior (such as time spent studying or interacting with faculty), students' self-assessments of their learning, and their satisfaction through surveys. So far, students have reported that their ability to communicate and their social interaction have improved. While they are glad to be encouraged to work in groups, they are not fully satisfied with their sense of academic community with other students, which suggests to faculty that they need to improve the effectiveness of the learning communities. Another general-education innovation is the Linked Course Program, in which students take a set of two or three lower-division courses in which assignments are coordinated. Students report a greater sense of connection with each other and with faculty, as well as greater learning resulting from being able to apply what they learn in one class to another.

Ways to assess student learning in the majors at George Mason are most developed in the College of Arts and Sciences, where they are being incorporated into the comprehensive review of all degree programs. Some findings in this college and in the Institute of the Arts suggest that students want a more cohesive curriculum, to which the math department has responded by instituting more stringent prerequisites for some courses and a math tutoring center, the music

department by developing common syllabi and texts for its introductory courses, and art studio faculty by establishing guidelines for syllabi. Students are also able to point to gaps in their own skills or knowledge, to which the math faculty responded by developing an actuarial science track, the music faculty by starting a course in music pedagogy, the physics faculty by increasing its emphasis on computer and presentation skills, and the dance department by introducing a new methods course for teaching creative movement in the schools. Sometimes the gaps are in support services: art studio students' dissatisfaction with advising has led to greater faculty attention to this responsibility.

In the School of Information Technology and Engineering too, students have prompted curriculum enrichment: the computer science faculty has added more courses in networking and human-computer interaction and the electrical engineering faculty has increased its emphasis on oral and written presentation skills in response to student concerns. The computer science senior design exhibition, which is evaluated by both faculty and outside customers for whom the students designed the software systems, triples as an assessment vehicle, a culminating experience for students, and a valuable addition to a job-hunting portfolio.

Assessment contributes to planning and resource allocation primarily at the departmental level. But George Mason has many innovative efforts underway as a result of restructuring and is beginning a major review of all initiatives undertaken during its period of rapid expansion. Student learning, as measured by the various assessment mechanisms the university has in place, should be a critical piece of evidence as the university determines what works and what does not.



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James Madison University

James Madison University has been tracking what its students know and can do longer and more thoroughly than any other institution in the Commonwealth. And the university has made decisions based on the results, the most sweeping of which has been in general education. There, the lack of specific objectives and clear results in the old liberal-studies program led to the development of a new, more tightly focused general-education program. The new program has specific objectives clustered into five groups: skills of the 21st century, ideas and expressive forms in the human community, the natural world, social and cultural processes, and individuals in the human community. Students can meet the requirements for a given cluster by taking two to three cross-disciplinary course sequences. This allows students to understand the linkages among disciplines and provides a more coherent intellectual experience than has characterized the nationally typical general-education curriculum of the past several decades. Further, course sequences in the clusters are tailored to the needs of students in various majors. The university has just begun to assess student learning in the new program. An intriguing early finding is that in the cluster focusing on ideas and expressive forms in the human community, interdisciplinary courses were more effective than traditional fine-arts classes.

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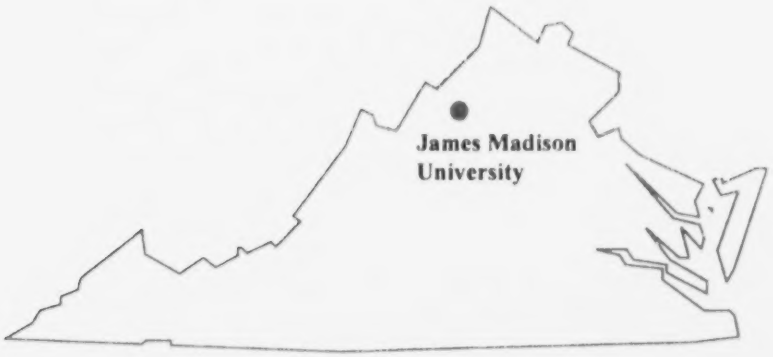
Academic programs use information they collect about student learning to continuously refine their curricula, and that information has led to numerous changes in the major programs over the years. Assessment findings are integral to a more comprehensive process of academic program review. Programs undergo this review every six years to determine their appropriateness, given the needs of the employment market and other external factors in the world. Then the university solicits external critiques of its programs and modifies them accordingly. Cross-disciplinary linkages, improved practica and internships, and enhanced employer contact have resulted. The program reviews of the hotel-restaurant management program and the human resources and information and decision sciences departments have led to revised curricula, the development of minors, strengthened inter-departmental linkages, and the elimination of unnecessary programs.

Student affairs programs too are expected to contribute to student learning at JMU. Their successes and failures in doing so have affected the direction of some programs. For instance, success in a program designed to improve students' study skills led to its incorporation into the summer transition program. The assessment of the residence hall directors training program suggested that the experience was contributing to their development as leaders and also how it could be strengthened. The Madison Leadership Center improved its events-planning and lease workshops on the basis of tests given to students who had completed them. Having found that a large proportion of substance-abuse offenders did not change their behavior as a result of going through a judicial evaluation, judicial affairs is piloting some new programs with those offenders. And finally, evaluations of strategies to increase success among at-risk students suggests that they are effective in keeping such students in school long enough for them to succeed academically. This finding encouraged the staff to reach out to those students who typically do not use their services, non-black minority students.

The administration at James Madison has placed the assessment of student learning at the heart of its planning and decision making. Use of results to determine the effectiveness of their courses is a condition of a department's eligibility for faculty merit pay money. And evidence about learning informs difficult decisions: for instance, the Freshman Seminars were terminated when the university found little trace of their effect on student learning, and programs have been eliminated or reorganized as a result of program reviews that include assessment. Deans are made aware of what students are learning in their colleges' programs through departmental reports, which yoke assessment findings and the department's description of its critical needs.

Finally, assessment will help the university measure the effectiveness of new approaches to learning, which are part of its restructuring efforts. For example, James Madison's students are now able to earn three hours of academic credit in public speaking by demonstrating that their skills and knowledge in this area are comparable to those of students who have completed a speech course. And the university is carefully monitoring the learning resulting from the new approach to science education that is being taken by its experimental Integrated Science and Technology program.



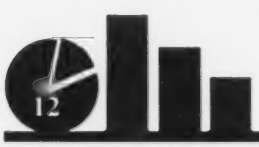
Longwood College

Longwood's historically strong emphasis on students is embodied in its integrated approach to students' intellectual, personal, and social development. At orientation, all students assess their specific strengths and weaknesses in these areas and plan their programs accordingly. Upon entering the college, Longwood's students generally describe themselves as able to work independently; good contributors in a team setting; and aware of their own personal abilities, interests, and skills. The information gathered about entering students is used in advising and for placement purposes.

Consistent with Longwood's belief that much student learning takes place outside the classroom, the college has . . . initiated a series of on-campus learning activities that extend its academic reach to residence halls and special events.

Several years ago, Longwood created a new general-education program designed to meet its intellectual goal of mastery of a broad body of knowledge. This curriculum was designed with new and revised courses aimed at helping students see things in perspective; appreciate and enjoy artistic expression; and respond to the complex world surrounding them critically, creatively, and logically. Consistent with Longwood's belief that much student learning takes place outside the classroom, the college has also initiated a series of on-campus learning activities that extend its academic reach to residence halls and special events.

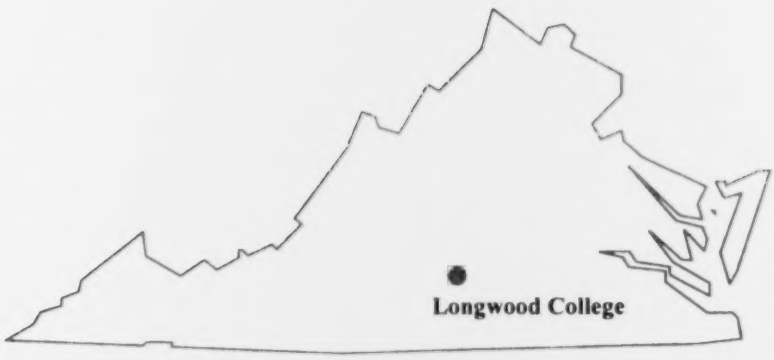
Comparing the gains reported by Longwood students to those reported by students from comparable public colleges, higher percentages of Longwood students thought they had made substantial gains in ten of 14 areas, especially in the abilities to learn independently, put ideas together, think analytically, and write clearly. The scales on which a smaller percentage of Longwood students reported gains compared to students from similar institutions included obtaining a broad general education, acquiring a familiarity with computers, and seeing the importance of history. Partially in response to the second finding, four additional residence halls have been networked and two computer labs established. Further, through a reallocation of funds made possible by restructuring, an Instructional Technology Laboratory has been developed to offer the Longwood community a variety of training opportunities, services, and access to state-of-the-art equipment. In response to the other findings, the Longwood faculty has initiated a full review of previous assessment findings and begun collecting recommendations for curricular and programmatic changes, due to be approved by the faculty senate in November 1996.



Longwood has studied transfer and commuter students during the past year. After declining in numbers during the early 1990s, transfer students are increasing at Longwood, where they have academic performance that mirrors that of native Longwood students. To meet better the needs of commuting students, Longwood extended the operating hours of many student-support services, expanded scheduling of early-morning and late-afternoon classes, increased access to computer and electronic facilities, and improved orientation for transfer students.

A 1994 study of honors students showed that the college had successfully addressed issues it identified in an earlier study of this group. Honors program students have increased in number, possibly as a result of their view that honors classes are smaller, give them more contact with faculty, and provide a more stimulating atmosphere than other classes do. Students in honors courses feel they spent more time writing and that they learn to speak and express their ideas better than do their peers.

For several years, Longwood has used assessment findings to improve its major programs. For example, in response to findings that business students needed to be better equipped to deal with a multicultural society, the faculty expanded the international economics component of the business curriculum and encouraged more enrollment in foreign-language study and study abroad. To meet the needs of students preparing to teach, the college reallocated a faculty position for a specialist in teaching science and math, lengthened student teaching internships, and increased its emphasis on classroom management techniques. The majority of Longwood's majors have a capstone course in which students integrate learning from previous courses into a coherent whole. Faculty are still working on developing the scoring guides that will make the assessment of student learning more useful to them and to the students.



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Mary Washington College

The major change in Mary Washington College's curriculum in the past biennium is the development of a new general-education program, which is scheduled for implementation in fall 1997. The new program is built around a set of eight learning outcomes. As yet, the college has no plans to measure directly student learning in the program, aside from evaluating student work in the individual classes. The college plans to monitor and maintain the quality of the program by surveying students in general-education courses about what they have learned and by surveying graduating seniors about their progress toward the goals of the program. Graduating senior surveys have already proved useful in identifying faculty advising as an area that needs to be strengthened at the college. As a result, the college is working to improve advising and is looking for ways to reward faculty for it.

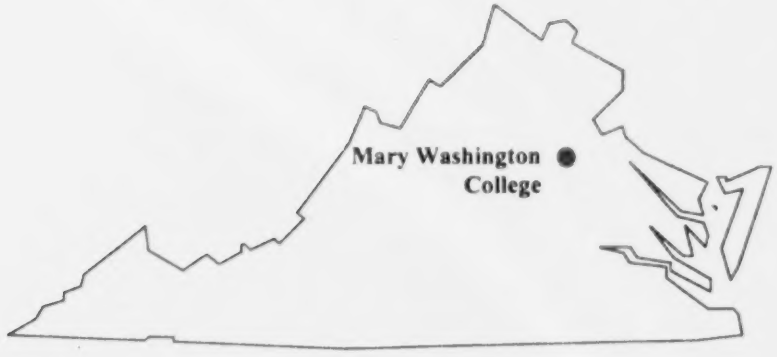
Issues that students in many majors at Mary Washington College would like to see better addressed are similar to those found at other colleges and universities: improved advising, especially regarding careers; the incorporation of technology into virtually every curriculum; and better opportunities to apply their knowledge in the real world.

Graduating seniors, as well as alumni in some majors, also report on their major programs. The direct evidence ranges from work in a capstone course (courses in which students integrate in a culminating project what they have learned in their majors), to the scores on nationally standardized examinations, to students' success in applying their knowledge, to the work accumulated in a portfolio. Many programs — anthropology, German, and psychology, to name just a few — report using evidence of student learning to guide them in determining what aspects of the curriculum students are not understanding so that they know to stress those elements in their courses and which courses to add. The business administration faculty has used the scores on a standardized exam and the opinions of graduating seniors to revamp a course in finance; a similar test and an alumni survey help the computer science program keep pace with a rapidly evolving field. And the chemistry and biology faculties used the results of student surveys to revise the introductory courses in the programs, just as the English department has responded to similar surveys by increasing its attention to theory and history. The student-teaching experience has provided the education faculty with valuable evidence about students' ability to handle the discipline problems that arise in the classroom. Some departments also find it helpful to assess the gaps in students' knowledge and skills in the discipline when they begin

their studies; as a result of such an assessment, the international affairs and political science programs added courses in certain topics and increased the number of writing-intensive courses.

Issues that students in many majors at Mary Washington College would like to see better addressed are similar to those found at other colleges and universities: improved advising, especially regarding careers; the incorporation of technology into virtually every curriculum; and better opportunities to apply their knowledge in the real world. Mathematics, like several other departments, is strengthening its career advising and has introduced the graphing calculator; computer science is updating its hardware; theater students have responded favorably to the department's increase in production opportunities, new facilities, and enhanced technology; music is increasing performance opportunities for its students; and Spanish is increasing its students' opportunities to use the language outside of class. Students are very much aware of what will make them more employable in the future: in the historic preservation program, this has led them to appreciate writing- and speaking-intensive courses and the department to add an independent research project requirement; physics and biology have each increased its emphasis on both speaking and writing; art history will give priority to teaching writing and analytic skills in its upper-level courses; economics is increasing its emphasis on research methods and oral skills; and psychology has added several new applied courses to the curriculum to address the needs of students who do not go on to graduate school. Curricular gaps identified through assessment have influenced hiring in a number of programs as well and have encouraged some — for instance, philosophy, religion, American studies, and health education — to provide more structure and continuity to their majors or more uniformity to their introductory courses.

Assessment at Mary Washington College, in short, has been most valuable in providing faculty with a means to fine-tune and advance the curriculum.



Norfolk State University

During the past two years, Norfolk State University developed and implemented the Retention Enhanced Education Program (REEP), a comprehensive program for freshmen students that begins with testing of all new students except those with academic scholarships or high pre-entrance test scores, followed by the provision of academic support and instruction and aggressive academic advising. By the end of REEP's second year, Norfolk State University had increased by nine percentage points (from 58 to 67 percent) its rate of freshmen who continued at the university the following year. Moreover, using the tracking data associated with the REEP program, NSU found that a majority of the freshmen who failed to return for the second semester did so because of lack of financial aid. As a result, the university accelerated its financial counseling and assistance initiative for freshmen.

In the assessment of its majors, Norfolk State examined the structure, sequence, and content of its programs and reviewed existing data about their effectiveness. All Norfolk State departments initiated capstone courses to provide students with a more structured method for integrating the knowledge they gain throughout their collegiate education.

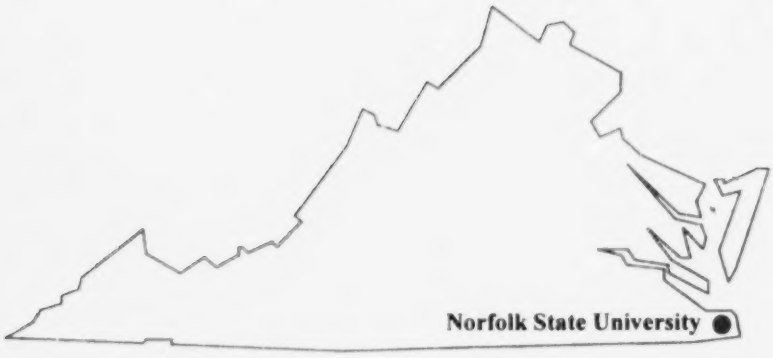
As part of its assessment, Norfolk State also reviewed its other student services, looking for ways in which it could improve them. To meet the needs of students, the university is converting some dormitory space to learning/living centers equipped with study labs.

One of Norfolk State University's significant accomplishments in the past biennium was the creation of a new general-education curriculum, a 40-credit set of courses in communication; humanities; social sciences and cultures; mathematics and natural sciences; health and physical education; and digital, computer, and telecommunication technologies. The university's general-education program has well-articulated goals, and the university is developing an assessment of that program that is reasonable, manageable, and effective.

In the assessment of its majors, Norfolk State examined the structure, sequence, and content of its programs, and reviewed existing data about their effectiveness. In a response to findings in the teacher-preparation programs, workshops were developed to assist student teachers to improve their classroom-management and time-management skills. The Department of Health, Physical Education, Recreation, and Exercise Science revised course content to address

students' weakness in anatomy and neurology. The department also worked with a neighboring medical school to gain access to a cadaver lab for its exercise-science students. In response to feedback from graduates and employers, the medical technology program changed the content of several courses to better address the needs of students. All Norfolk State departments initiated capstone courses to provide students with a more structured method for integrating the knowledge they gain throughout their collegiate education.

In the last two years, Norfolk State restructured its assessment program so that it began asking the fundamental question of what each specific program is expected to achieve. The university completed a review of all departmental goals and objectives, assessment methodologies and instruments, and findings before it proceeded with an examination of the academic and developmental experiences of students. By doing so, the university intends to make assessment data available in a context in which program improvement can take place. The university now has a myriad of data sources related to assessment, which it is reviewing in order to determine which provide the most useful information for improvement.



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Old Dominion University

In a major restructuring of its general-education program, Old Dominion University made significant changes in its curriculum, sequence, and delivery. The new curriculum has more emphasis on writing, critical thinking, science, technology, and computer literacy than did the previous one. It also has a stronger and more focused upper-level component that emphasizes integration of knowledge at the advanced level through an interdisciplinary focus, a second major or minor, or an international certificate option.

Old Dominion University reviewed the syllabi from hundreds of courses from all of its colleges and found that there was a strong correlation between emphasis on writing skills in courses and students' passing scores on the University's pre-graduation writing test, the first such exit exam in the state.

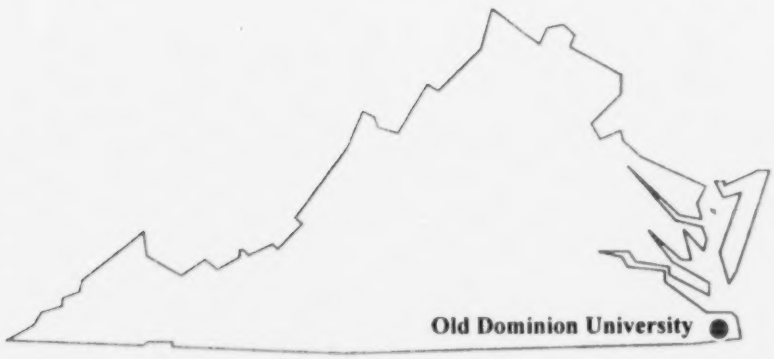
Old Dominion University reviewed the syllabi from hundreds of courses from all of its colleges and found that there was a strong correlation between emphasis on writing skills in courses and students' passing scores on the university's pre-graduation writing test, the first such exit exam in the state. In its syllabus study, the university also found that there was a high correlation between the amount of content related to computer use, science, gender issues, minority issues, non-western cultures, critical thinking, math skills, and leadership abilities and students' satisfaction with their skills and knowledge in these areas. At the same time, the syllabus study suggested that there may be inadequate coverage of computer and math applications and international perspectives in some curricula. As a consequence of these findings, many faculty improved their courses by increasing the amount of writing or critical thinking or addressing more specifically other general-education goals. The university is also working to increase students' access to technology.

Each of the six colleges at the university used data from the study of syllabi, along with program-generated data, in assessing its undergraduate programs. This information led faculty in most colleges to enhance student advising, increase the use of computer applications, and develop internship experiences. To help students better integrate their knowledge and skills, capstone courses were initiated in a number of programs. These changes will be evaluated in the next few years.

The university offers a guaranteed internship program, aptly named the "Career Advantage Program," that connects students with employers to assist students in gaining skills and experiences needed for the world of employment. The university requires students to establish appropriate learning goals and objectives for their experiences and to share those goals with the learning-site supervisor. The internships, most of which are paid, also include a writing component. A recent study found that 99 percent of the student interns would recommend an internship to a friend. Internships are available in all majors.

The university has been able to predict academic success in students' freshmen year based on some non-academic affective factors, for instance study skills. By having this information, advisors can suggest appropriate supplemental instruction techniques or other interventions for students at risk of failure. The university reports some success in retaining these freshmen.

One of Old Dominion University's major programs is its TELETECHNET program, which offers televised courses in 15 baccalaureate programs — nursing, engineering technology, business, education, communications, criminal justice and others — at higher-education centers and community-college sites around the state. Students in these courses perform very similarly to those in on-campus courses. TELETECHNET students are very satisfied with the university and their education, as well as with the televised course formats, as demonstrated by the fact that 92 percent of students who enrolled in fall 1995 reenrolled in fall 1996. Faculty who teach TELETECHNET courses receive preparation to do so and later report that the experience improves their teaching ability in on-campus classes. The university has increased the utilization of computer workstations at distant sites, increased e-mail access for students, continued to provide fast and convenient local library access, and hired site coordinators who advise students and provide other services at the local site.



Radford University

In the past two years, Radford University has made significant progress in defining more specific goals for the general-education portion of the curriculum. The faculty believes that as citizens of a globally interdependent and multi-cultural world, graduates should be able to think about ideas, issues, texts and contexts within and across academic disciplines. They should be able to develop pertinent questions, construct logical and persuasive arguments, formulate critical perspectives, use appropriate research methodologies and computer technologies, and work with others in a shared process of inquiry and problem-solving. In addition, the faculty has identified eight areas in which it expects students to gain competency, each with its own specific learning goals: the arts, communication, humanities, language, lifestyle development, mathematics, the physical and natural sciences, and the social and behavioral sciences.

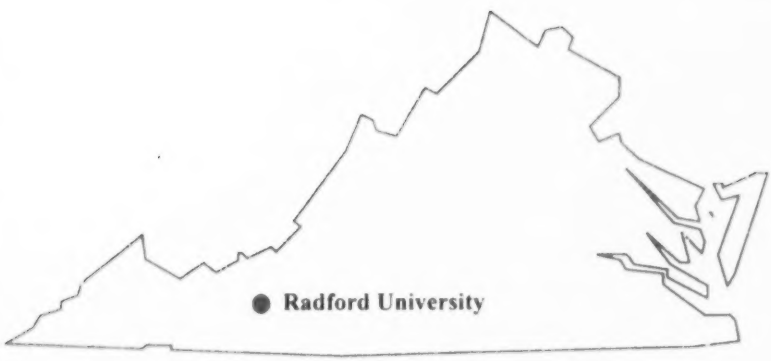
In the majors, Radford faculty have... become more explicit about what students should learn in any course, with course syllabi available electronically that include such information.

Assessment will focus on the extent to which students meet the goals of the eight knowledge areas and the overall goals of general education. The results, supplemented by surveys designed to obtain information regarding students' perceptions of what they are learning and the extent to which they are satisfied, will guide curricular and pedagogical reform. Faculty-development workshops are used to educate faculty about methods for determining whether students have met the learning objectives of general education and to help them make appropriate changes to their courses and teaching methods.

In the majors, Radford faculty have also become more explicit about what students should learn in any course, with course syllabi available electronically that include such information. Moreover, through interviews and surveys of current students, surveys of alumni about their educational and career preparation and experiences, locally developed tests, standardized tests, licensure exams, surveys of employers, and performance assessments (such as senior projects), faculty members garner data that they use to change course sequencing and prerequisites, add or eliminate course offerings, develop internships and capstone courses, make the majors more pertinent to the worklife of graduates, revise placement guidelines, form concentrations, provide advising, increase group work, and eliminate duplicative courses. For instance, the sociology faculty decided that their senior projects and survey demonstrated that their students had too tenuous an understanding of contemporary theory and applied sociology, resulting in the addition to the curriculum of a course focusing on theory and several applied courses.

Radford keeps track of the performance of some of its more marginal populations, such as transfer students, older students (both of which groups do as well as or better than "native" students) and at-risk students. The latter group includes minority students, whose retention and performance improved dramatically as a result of some of the outreach efforts intended to help them with adjustment to campus life, until their performance and retention were virtually indistinguishable from those of the majority students. Other retention programs have caused some at-risk students to outshine their peers. It has become clear that many students leave, not because they cannot succeed academically but because they fail to find a place in the university community, and the university's various retention activities have consequently focused on this need.

Attention to what students learn has become increasingly important in the university's planning efforts in the colleges and graduate school, such as the College of Arts and Sciences' strategic plan and its system of program reviews. Assessment results are used to distribute resources as well, from departmental grants to address issues raised by student performance and satisfaction to the allocation of on-going resources based on evidence of program quality. As it continues to restructure, Radford uses assessment information in deciding on strategies (such as privatization of the bookstore and health services or the improvement of summer school) and determining the effectiveness of departments. It is also tracking the effects of some of its restructuring activities on students — for instance, the use of technology in instruction, which seems to produce as much learning as more traditional means.



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Richard Bland College

Richard Bland College is the only junior college in Virginia — that is, the only college whose exclusive mission it is to prepare students for transfer. Therefore, its attempts to determine what students learn center on its success in preparing them to do well at a four-year institution. Overall, Richard Bland students transferring to senior institutions perform satisfactorily, with an average drop in grade-point average of less than a half a point. During this biennium, the college will try to find out more about these transfer students than their grade-point averages, including the students' performance in selected courses.

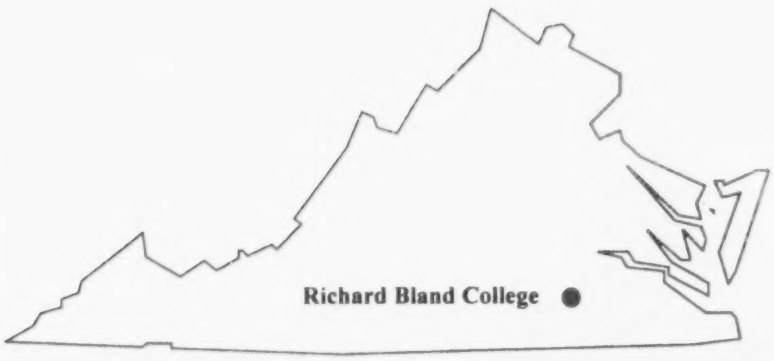
The next challenge for the college will be to supplement its test with authentic performance evaluation, such as final projects that bring together what students have learned in the major, in which they demonstrate that they possess the intellectual skills that the faculty agree should result from Richard Bland's program.

As a transfer institution, the curriculum of Richard Bland College is designed to provide a general liberal education. The college has recently revised its general-education goals and objectives. Now all graduates of the college are expected to acquire the ability to analyze and critique information through accurate reading, listening, and logical thinking; the ability to acquire, organize, document, and present written and oral information clearly, precisely, and correctly; the ability to acquire, process, understand and use quantitative data; an understanding of how major historical factors and events have influenced the development of civilization; an understanding of major natural laws and theories that govern our universe; the ability to apply the scientific method to the acquisition of knowledge and problem solving; an understanding of major social forces that have shaped and continue to shape contemporary society; an understanding of the human experience as revealed through creative expressions from the humanities; and an understanding of the components of a healthful lifestyle, including the benefits of physical fitness.

The college has designed its own test to assess what its students have learned in general education. The test showed that the class of 1995 scored 16 percent higher than they did on the same test taken a year prior as freshmen. The next challenge for the college will be to supplement its test with authentic performance evaluation, such as final projects that bring together what students have learned in the major, in which they demonstrate that they possess the intellectual skills that the faculty agree should result from Richard Bland's program.

To supplement the college's assessment of general education, the college has begun assessing the effectiveness of its student services. One area which received significant attention over the past two years has been the college's advising process. The results from the ACT advising survey, administered in 1994, led the college to provide additional training sessions, scheduling and organizational tools, and course-by-course transfer guides for its advisors.

Assessment results have played a key role in the automation of the library and the reorganization of the library staff. Resources have also been provided to develop on-line registration procedures due, in part, to assessment recommendations.



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University of Virginia

The most impressive part of the University of Virginia's assessment program is a longitudinal study of the undergraduate class of 1992. Using questionnaires and interviews, the university began in 1988 to follow 20 percent of the undergraduate class, comparing their responses as first-year students with those they made when they were about to graduate. The university asked students what they wanted to learn and later what they had learned. The study found that over the four-year period students' educational goals remained constant, with a concentration on their personal growth and development. Of the four academic goals they considered important, students gave credit to the university, in descending order, for their progress in learning to write clearly, learning to put ideas together, learning to think analytically, and gaining a broad general education.

The most impressive part of the assessment program is a longitudinal study of the undergraduate class of 1992. Of the four academic goals they considered important, students gave credit to the university for their progress in learning to write clearly, learning to put ideas together, learning to think analytically, and gaining a broad general education.

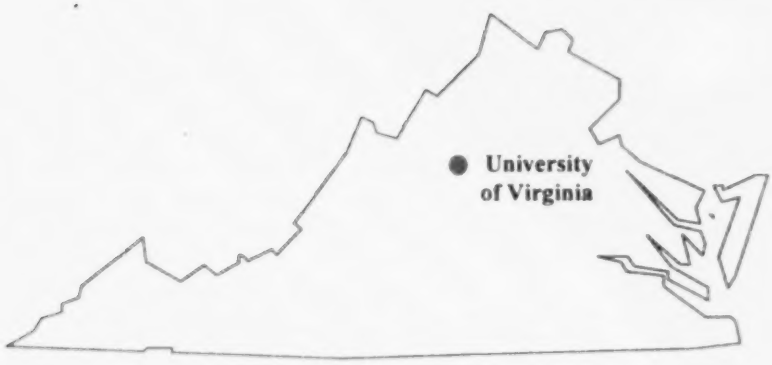
A large majority of 1992 graduates in the study also reported being very satisfied overall with their adjustment to and their experiences at the university and with their academic lives overall. Students were most satisfied with the intellectual challenge of their classes, with what they learned in their courses, and with the quality of teaching by their professors. Somewhat smaller majorities expressed satisfaction with the classroom experience, class size, civility, social life, and freedom of expression. Students were least satisfied with academic advising, particularly during the first two years. Study findings have led to changes in the academic advising system, greater attention to diversity issues, and the initiation of the Teaching Resource Center.

In fall 1995 the university launched a new longitudinal study of the class of 1999. The new study is focusing on general education, using portfolios, interviews, and surveys to assess students' progress in this area. General-education learning goals include desired outcomes in the areas of leadership skills and cultural competence, ethics, values, service commitment, individual and team effectiveness, professional and career readiness, effective communication skills, intro-

spection and self-assessment, and life-long learning and development. The university also has assessed its student-affairs section, focusing on how various services and activities contribute to students' learning and development.

A parallel alumni study of the undergraduate classes of 1982, 1987, and 1990 found that very high majorities of UVA graduates express satisfaction with their undergraduate education and their lives since graduation. The study found that 60 percent of the graduates of UVA's undergraduate schools earn a graduate or professional degree within ten years and that two-thirds of the graduates earn such degrees within 12 to 15 years. Large majorities said they were satisfied or very satisfied with their current jobs and that UVA had prepared them well for their work. The alumni also reported incomes well above national average.

In 1994-1995 the university completed the assessment of all of its undergraduate majors and initiated a system of program reviews, which will include both internal and external analyses. These reviews cover all aspects of each department and program's activities, both undergraduate and graduate, on a five-year cycle. The university expects these reviews to result in continuous improvement of an already strong institution.



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Virginia Commonwealth University

Virginia Commonwealth University's assessment program reflects the distributed character of the university, combining university-wide assessment and oversight with school-based assessment in the major. The university has a university-wide framework for general education that specifies learning objectives in the areas of written and oral communication, ethics, quantitative analysis, science and technology, cultural interdependence, visual and performing arts, and humanities and social sciences. Each school takes primary responsibility for a general-education program that fulfills university-wide objectives. The College of Humanities and Sciences is currently piloting new general-education courses, including new courses in mathematics and statistics and a new set of general-education sciences courses that respond to the results of an assessment of scientific literacy. Implementation of the new school-based general-education plans begins in fall 1997.

At the school and department level, a variety of assessment methods are employed, including senior capstone courses, exit interviews of graduating majors, surveys of employers, portfolio reviews, and critiques of student work.

The university has used senior satisfaction surveys and recent graduate surveys to assess students' perceptions of the quality of their education and the degree to which it has contributed to advanced study and employment. At the school and department level, assessment of student outcomes is part of the self-study process of programs accredited by national organizations and associations. In addition, a variety of assessment methods are employed, including senior capstone courses, exit interviews of graduating majors, surveys of employers, portfolio reviews, and critiques of student work. The School of Business, for example, used focus-group interviews of alumni and employers and benchmarking with other institutions to revise its undergraduate curriculum. The Department of Sculpture used the results of faculty critique sessions of student work to assess objectives of the curriculum and revised its curriculum based on its results. Faculty in the Department of Physics used a critique of senior projects to revise its curriculum. The mass communications faculty uses professional advisory boards to review the currency of public relations and advertising curricula, while the departments of chemistry, biology, and urban studies in the College of Humanities and Sciences and programs in the schools of education, dentistry, medicine and nursing use nationally administered examinations. The Department of Foreign Languages has developed proficiency measures for each level of each language to assess both individual student performance and the effectiveness of its language programs.

Virginia Commonwealth University accepts a large number of transfer students: about 50 percent of its baccalaureate graduates transferred from another institution. In its studies of transfer students, VCU has found that transfer students graduate at a higher rate than students who began as freshmen and that their grade-point averages are very similar to those who began their academic work at VCU.

The university is implementing a university-wide approach to student surveys which include administering the College Student Inventory to all freshmen to be used as part of the advising process, a new student-satisfaction survey to be administered to second-semester sophomores and graduating seniors, and a new alumni/recent graduate survey. Having identified the retention of freshmen as a concern, the student and academic affairs staffs working together have developed an early-alert system for students in academic trouble, a freshman advising center, a mentoring program to assist students in large lecture courses, and enhanced first-year experience activities. The university has restructured advising and student services and used assessment results as a basis for reallocating resources to support these activities.

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Virginia Community College System

During this biennium, the community colleges focused their attention on what students are learning in general education, in the majors, and through off-campus and dual-credit instruction. The colleges commonly rely on nationally normed tests to assess what students learn in their general-education courses. The tests showed that Virginia's community-college students generally perform at levels equivalent to freshmen and sophomores at two-year and four-year colleges nationwide. Each college also surveys employers, current students, and/or graduates about their satisfaction with the education it offers. Some have used focus groups and advisory committee members to determine whether students have the requisite general intellectual skills to be successful in the workplace. These various kinds of information have led to a number of improvements: colleges have reorganized course content and the sequence of courses, established pre-requisites for some courses, changed textbooks and resource materials, provided more opportunities for oral expression through reduced class size, included additional writing assignments in all courses, changed exams to include more critical thinking, increased academic laboratory support, and increased attention to pedagogy and the use of technology.

The use of outside evaluators of student work appears to have fostered partnerships between some colleges and their curricular advisory committee members, business and industry, local public schools, and the four-year institutions.

Studies of program length in the majors, begun in 1994, required that colleges re-examine program objectives. Colleges reported that objectives were also revised to include performance factors that employers identified as important, to correct weak areas of student performance identified through assessment data from previous years, and to ensure that student achievement of the objectives could actually be measured. The use of outside evaluators of student work appears to have fostered partnerships between some colleges and their curricular advisory committee members, business and industry, local public schools, and the four-year institutions. These partnerships have improved curricular design and helped prepare some students to meet changing business and industry needs and others to succeed at four-year institutions.

When the same courses offered both on and off campus are taught by the same faculty, the majority of colleges have assessed the effectiveness of the off-campus courses by comparing on- and off-campus student grade point averages, grade distributions, and individual course grades. The community colleges are aware that when adjunct faculty teach off-campus classes, there is a potential for more variability in what students learn. Where differences in grade distri-

butions in the same courses are found between full-time and adjunct faculty, division chairs have been prompt to discuss expectations with adjunct faculty.

Assessment of distance learning is new and is complicated by the fact that colleges are using various delivery methods for this form of instruction, which is neither time nor place bound. It may be delivered through the use of compressed video, audio and video conferencing, or extended learning institutes. It may be delivered in on-campus or off-campus settings where students must be physically present, or students may study at home and come to campus infrequently or not at all. The colleges are still in the early stages of assuring the quality of that instruction. They have made more progress in assessing the effectiveness of the student services they offer off-campus students. Feedback in this area has enabled the colleges to make improvements in course selection, counseling, orientation, first class meetings, placement testing, voice mail, computer bulletin board systems, computing laboratories, and course testing procedures. By monitoring student progress, colleges have a better idea of the types of students who will be successful in distance learning courses and the changes they need to make in support services to ensure student success.

For dual-credit instruction — college courses given to high-school students for both high-school and college credit — as with other off-campus instruction, colleges need to make sure that students in these courses learn as much as they would if they were enrolled on campus. Many colleges observed that dual-credit students are achievers by nature, so they were not surprised when they found that the grades of these students were higher than the grades of students taking the same courses on campus. Most colleges have indicated that the next important step in assessing dual-credit students is to obtain specific and current data on student performance at four-year institutions. The colleges need to do this because a high percentage of students taking a dual-credit course offered by a community college go directly to a four-year institution after graduation.

At many of the colleges, assessment results are integrated into the program-review process, whose results in turn affect resource allocations. Resources are provided to programs that demonstrate needs through assessment findings — for example, additional faculty, increased program budgets, upgraded laboratories, automated placement testing systems, and increased professional development activities. Many community colleges appear to be making changes to ensure that assessment increasingly affects resource-allocation decisions.

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Virginia Military Institute

The assessment program at the Virginia Military Institute is based on the premise that the entire VMI experience — the curriculum, the co-curriculum, and barracks life — all contribute to the maturation and intellectual development of the cadets. The assessment program has verified that VMI cadets progress by fits and starts towards a common end: physically fit, extroverted, committed, rule-bound, self-controlled, dominant adulthood. It tracks this progress by keeping track of everything from the personality profiles of entering students and their relationship to student retention during the first year, the ways and extent to which company-room training develops communication and leadership skills, the ways in which the various majors develop the intellectual skills of students, and the satisfaction of first classmen and alumni.

The assessment program has verified that VMI cadets progress by fits and starts towards a common end: physically fit, extroverted, committed, rule-bound, self-controlled, dominant adulthood.

Assessment results also have been used to improve student success. For instance, the institute has developed measures to improve student retention based on what it has learned about the personality profile of students who are most likely to drop out. As the SAT scores of entering students have declined over the past five years, thus putting the entering cadets at greater academic risk, these efforts become increasingly important. First-classmen and alumni, while generally pleased with their VMI experience, have also had their dissatisfactions addressed: a newly instituted enrollment management system will coordinate and should improve such services as admission, financial aid, and academic and career advising. And elements of the co-curriculum have been modified in response to assessment findings.

The academic focus of the first two years of a cadet's life is general education. VMI, in response to earlier assessments of student learning in the "core curriculum," has just instituted what it calls the Integrated Freshman Year Project, "a more cohesive, coordinated first-year program that provides each cadet with the basic abilities necessary for success in his major and at the same time encourages him to begin to see how the different disciplines and programs go about producing knowledge." The project includes common syllabi and tests across required courses, which may at the same time use different teaching strategies to accommodate different learning styles among the cadets. The results of the new program are just beginning to be measured.

Academic programs at VMI, with varying success, monitor the learning of their students and use the results to improve what they do. This past year, six of eleven departments used assessment information in making changes to improve learning in their majors. The chemistry department modified its training in laboratory and health issues, the mathematics and computer science department began teaching precalculus and introductory programming with labs, the physics department began to include thermodynamics in upper-level courses and to require students to present their research in departmental seminars, the mechanical engineering department increased its emphasis on problem-solving and mathematics in its introductory courses, the civil and environmental engineering department moved its civil-engineering seminar from the first to the second year in order to emphasize at the right time technical writing and oral presentations, and the English and fine arts department now uses the development of writing portfolios as the cornerstone of its introductory writing course. Increasingly, assessment at the institute will be incorporated into a larger process of program review.

As it adapts to meet the challenges ahead, both of restructuring and of the judicially mandated decision to admit women, VMI will have a wealth of information about how cadets develop and what works and what doesn't in its curriculum and co-curriculum to guide its planning and resource-allocation decisions in the process of change.

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Virginia Polytechnic Institute and State University

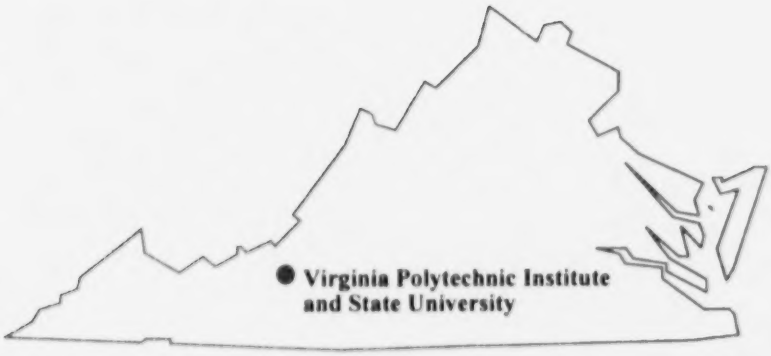
Virginia Tech's largest curricular accomplishment in the past biennium has been the implementation of its new core curriculum. Like many other institutions, Virginia Tech became dissatisfied with its distribution requirements when it became clear that it could not determine what students had learned as a consequence of those requirements. So it developed a general-education program with goals for student learning in seven areas: writing and discourse; ideas, cultural traditions, and values; society and human behavior; scientific reasoning and discovery; quantitative and symbolic reasoning; critical issues in a global context; and (when it found that Tech students engaged in the creative arts less than it wanted) creativity and aesthetic experience. Faculty teaching the courses and students taking them will report on what students have learned related to the relevant course goals. In addition, like those at many other institutions in the Commonwealth, Tech students are required to complete at least one writing-intensive course (the requirement will later be increased to two). This requirement and the assessment of its effectiveness led to significant curricular changes in the materials science and engineering and engineering science and mechanics programs, which integrated writing instruction into many of their courses and developed out-of-class communications workshops.

Virginia Tech is a leader in the state in its use of technology in instruction. So efforts in the departments of English and mathematics to evaluate how students' writing and ability to do algebra and calculus might be improved by the use of technology are particularly valuable.

Virginia Tech is a leader in the state in its use of technology in instruction. So efforts in the departments of English and mathematics to evaluate how students' writing and ability to do algebra and calculus might be improved by the use of technology are particularly valuable. Departments also assess the learning of students in their undergraduate and graduate programs, relying on some combination of direct measures of student learning and student, graduate, and employer satisfaction surveys; program changes are made as a consequence. The Department of English had an outside consultant review student essays and is considering how to use her suggestions to improve the program, while chemistry faculty have changed their courses in response to their graduates' recommendations to further emphasize computers, hands-on work with instruments, statistics, and writing.

Virginia Tech did some university-wide studies during this biennium. One focused on how well the university has prepared its students for life after college. Although results vary by major, a survey of graduates revealed a generally high level of satisfaction with their worklives, in that they make more money, are more satisfied with their jobs, have jobs more closely related to their undergraduate majors, had better employment prospects, and were better prepared for their jobs than the average of college graduates nationwide. The university also studied the challenges faced by its African-American students, sharing the results with parents and faculty, and surveyed non-returning students to find out whether they had dissatisfactions that could be remedied. In descending order of importance these were financial aid, employment in the area, faculty advising, the university's size, and getting into a desired major. Consequently the university has identified freshman advising as a priority for improvement.

The university has in place a planning process in which program review is linked to selective and differential resource allocations. Assessment of student learning is critical to the evidence of program quality required in program reviews. It should also supply crucial evidence of how well departments have met the goals of the Exemplary Department Program: in 1996 "developing and sustaining innovative and effective departmental approaches to introductory courses;" in 1997 "maintaining a high quality of advising;" and in 1998 "working collaboratively across departmental boundaries." Tech is also relying on assessment to alert it to changes in student learning that may result from restructuring activities such as college reorganizations, the development of new courses, and the use of new pedagogical techniques.



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Virginia State University

In the past two years, Virginia State University has established course requirements in the humanities, social sciences, natural sciences and mathematics, and health and physical education so that students may meet the university's general-education goals, which include the development of communication skills, quantitative skills, computer literacy, critical thinking abilities, ethical reasoning, health and wellness, concern for humanity and the environment, and global awareness and cultural diversity. It now is in the process of defining specific measurable goals within these general areas so that it can assess its general-education program.

To meet student needs, the university refined the monitoring process for students whose math preparation has been inadequate, initiated a tutorial service offered by the mathematics faculty, and increased the time spent on mathematics in the university's Summer Transition Enhancement Program for at-risk students.

During 1995 Virginia State University assessed the writing abilities of students in its English courses. Samples of student writing were evaluated by a trio of readers. Nearly three-quarters of the students had average writing abilities, with the remainder having very good or poor skills in this area. As a result, the university is considering a writing-across-the-curriculum program and has initiated a writing exit examination, one of just two such exams in the state.

During the same year, Virginia State assessed the mathematics abilities of its students through a post-test in college math, algebra, and trigonometry courses. It traced the disappointing performance of students to the elimination of remedial mathematics courses in 1994. To meet student needs, the university refined the monitoring process for students whose math preparation has been inadequate, initiated a tutorial service offered by the mathematics faculty, and increased the time spent on mathematics in the university's Summer Transition Enhancement Program for at-risk students. The university also is gradually raising its admissions requirements so that it will have better-prepared students.

The university plans to have each program state the knowledge, skills, and abilities that the graduates will have upon program completion, an important step for programs and one which thus far the programs have completed with variable success. Only when learning goals have been made explicit can measures be developed to determine if students have reached them. One successful assessment measure is the oral-examination requirement in history. Since some

students lacked the speaking skills needed for that examination, the university is reviewing the curriculum to see if it prepares students with those skills. Several departments have initiated capstone courses designed to integrate students' learning throughout the curriculum.

Since so much of student learning occurs outside of the classroom, the university has initiated some formal out-of-class learning activities. For instance, the university has established a connection with the local Toastmasters' Club, in which speeches given for the club may be evaluated for academic credit in oral communications.

In response to the finding that Virginia State's students were on average less satisfied with student life at the university than are students who attend other institutions, the university is working to more closely connect activities in academic and student affairs.

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